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ABSTRACT

The report documents evaluation by the Office of Educational Assessment of implementation by the New York City school system of the State Incentive Grant to Improve Pupil Performance which provided training to 5,000 teachers and 3,400 paraprofessionals serving handicapped students in elementary, intermediate, and junior high self-contained classes. Evaluation objectives were that 75% of both teachers and paraprofessionals would report increased knowledge of workshop topics and a positive overall assessment of the workshop. Five days of training were provided to all special education teachers with over 80% reporting increased knowledge and a positive workshop assessment. Paraprofessionals were provided with 15 hours of training and over 80% also reported increased knowledge and satisfaction with the workshop. Recommendations for further workshops included offering training at more sites, offering participants their choice of training topics, offering follow-up in school activities for paraprofessionals, and offering parallel training sessions to teachers and paraprofessionals on topics of mutual concern. (DB)

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# OEA Evaluation Report

State Incentive Grant
To Improve Pupil Performance,
1986-87

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# State Incentive Grant To Improve Pupil Performance, 1986-87

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SUMMARY OF THE STATE
INCENTIVE GRANT TO
IMPROVE PUPIL PERFORMANCE
1986-87

- The Division of Special Education's (D.S.E.) State Incentive Grant to Improve Pupil Performance (SIG) was fully implemented for elementary and intermediate/junior high school teachers and paraprofessionals.

- Participating teachers' (Component 1) and paraprofessionals' (Component 2) ratings of the amount of knowledge they gained and of the program itself exceeded the program objectives.

The State Incentive Grant to Improve Pupil Performance (SIG) was intended to enhance the quality of instruction provided to students with handicapping conditions. To this end, the program provided training to approximately 5,000 teachers and 3,400 paraprofessionals of elementary, intermediate, and junior high school self-contained classes.

The evaluation objectives for Component 1, which served teachers in regional and Citywide programs, stated that: teachers would increase their knowledge in specific areas covered in the staff development workshops; 75 percent of participating teachers would indicate that their knowledge of workshop topics had increased; and 75 percent would indicate that workshop information was relevant and would indicate a positive overall assessment of the workshop. The evaluation objectives for Component 2, which served paraprofessionals in regional and Citywide programs, stated that 75 percent would indicate that their knowledge of workshop topics had increased; and 75 percent would indicate that workshop information was useful and would give a positive overall assessment of the workshop.

The Office of Educational Assessment (O.E.A.) studied the implementation and outcomes of the program by interviewing a sample of teacher trainers, and by observing a sample of training sessions. O.E.A. assessed program outcomes by collecting information about the quality of the workshops, and perceived changes in knowledge from all participating teachers and paraprofessionals.

In Component 1, teacher trainers and site supervisors provided five days of training in the elements of effective instruction to all special education teachers of self-contained classes on the elementary and intermediate/junior high school levels. Reported knowledge gains were small but statistically significant ($p < .05$); effect sizes were small to medium, indicating little to moderate practical meaningfulness, possibly

due to a high level of knowledge before training. Over 80 percent of participating teachers indicated that their knowledge of workshop topics had increased and they judged all other dimensions of the workshops as positive. All Component 1 objectives were met.

In Component 2, teacher trainers provided 15 hours of training to paraprofessionals. O.E.A. received and subsequently analyzed 1,514 paraprofessional training questionnaires. Increases in knowledge were statistically significant ($p < .05$) and educationally meaningful. Over 80 percent of the paraprofessionals indicated an increase in knowledge and assessed various aspects of the workshops positively. Trainers reported that the SIG program provided much-needed and appreciated training to participants.

Criticisms of the program were directed mainly toward issues of scheduling and organization. Teacher trainers expressed dissatisfaction with the amount of time provided for preparation, the locations of training sites, and with the uniformity of training delivered to personnel with diverse backgrounds. Paraprofessional trainers felt that the participants' dissimilar educational experiences limited the training's effectiveness. They also suggested that some joint training for teachers and paraprofessionals would be beneficial.

Based on the findings of this evaluation, the following recommendations are offered:

- Allow trainers more time to prepare for workshops.
- Offer training at more sites, possibly on a rotating basis, to make workshop attendance more convenient.
- Offer teachers and paraprofessionals their choice of training topics based on educational background, years of experience, and professional need (including their students' program service category).
- For Citywide teachers, develop training geared to specific program service categories.
- Offer follow-up in school activities for paraprofessionals.
- Offer parallel training sessions to teachers and paraprofessionals on topics of mutual concern.

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# I. INTRODUCTION

This report documents the Office of Educational Assessment's (O.E.A.'s) evaluation of the State Incentive Grant to Improve Pupil Performance (SIG) program for the year 1986-87, its first year of operation. The Division of Special Education (D.S.E.) and the Division of High Schools (D.H.S.) established the program, under a state funding grant, for the purpose of enhancing the quality of instruction provided to students with handicapping conditions in regional, high school, and Citywide special education programs. This report evaluates the regional and Citywide program; the high school program is covered in a separate report.

The New York State Commissioner of Education's Part 100 Regulations require that students with handicapping conditions have access to the full range of programs and services to the extent appropriate to their needs. Teachers must modify instructional techniques and materials to the appropriate degree to allow students with handicapping conditions to meet diploma requirements. Professional development will enable special education staff to ensure compliance with the Part 100 regulations. A well-trained staff is vital to providing quality instruction. The SIG project provided the time for teachers and paraprofessionals to focus on one curriculum area, improve their general knowledge, and apply effective teaching strategies and modifications.

D.S.E. used funds from several sources to finance a staff development program. The SIG project funds provided substitute

coverage for releasing teachers from their classroom duties. The State-funded Special Education Training and Resource Center Program (SETRC) provided and funded some of the trainers for SIG. The SIG program partially funded other D.S.E. trainers and supervisors who delivered the remaining training. D.S.E.'s Office of Curriculum and Professional Development developed the program, introduced workshop materials to the program, organized the training sessions, and arranged for substitute coverage.

The SIG program evaluated in the present report has two components, each serving a different population: Component 1 provided teacher training; Component 2 provided paraprofessional training.

COMPONENT 1: TEACHER TRAINING

The program provided five days of professional development activities to special education teachers of self-contained classes: Modified Instructional Services (MIS) in regional programs in elementary, intermediate, and junior high schools and Specialized Instructional Environments (SIE) in Citywide programs. It was intended that all special education teachers with self-contained classes (approximately 5,000) attend the workshops. Teachers attended workshops during the contractual work day at locations other than their regular school sites. Special education teacher trainers and site supervisors conducted the training which began in mid-October and continued through early June.

The Office of Curriculum and Professional Development

scheduled the training sessions. The training schedule followed a pattern of two consecutive days of training, followed by a period of application in the classroom, a second two consecutive days of training at a later time, followed by another application period, and a final day of training. The schedule ensured that each workshop had between 25 and 30 participants.

The program focused on elements of effective instruction for handicapped students in the communication arts curriculum. For teachers of the mildly to moderately handicapped, the training included the following instructional strategies: questioning techniques, correction procedures, modeling techniques, and activities to promote generalization and retention. In all cases, the training emphasized the importance of adapting the general education curriculum to special education instruction.

Both regional and Citywide training programs followed a designated format of topics for each of the five days. The workshops were offered on a regular schedule throughout the year. The programs emphasized the importance of providing instruction which paralleled the general education curriculum but was modified to meet the needs of teachers instructing students on a variety of levels. In the Process for Early Childhood Assessment for Children with Handicaps (PEACH) program, a SIG component designed specifically for Citywide early childhood teachers, participating teachers discussed particular students in their classes, analyzed their specific needs, and planned activities to instruct them more effectively.

COMPONENT 2: PARAPROFESSIONAL TRAINING

The Office of Curriculum and Professional Development asked paraprofessionals to suggest topics they wanted the training to address. The office then developed the content of the training and scheduled the sessions. Paraprofessionals working with students in the same program service categories frequently attended the same workshops. Workshop size varied from 12 to 25. The paraprofessionals received money for each workshop they attended. The State Incentive Grant to Improve Pupil Performance Program provided 15 hours of training. The workshops, offered either on three Saturdays or at seven two-hour sessions after school hours, focused on increasing paraprofessionals' knowledge of effective instruction to enhance their ability to assist classroom teachers and work directly with handicapped students. A reported 3,400 paraprofessionals received 15 hours of training on a volunteer basis, after school hours and on Saturdays.

REPORT FORMAT

This report is organized as follows: Chapter II describes the evaluation methodology used. Chapter III presents an analysis of the qualitative and quantitative data for Component 1, teacher training. Chapter IV provides an analysis of the qualitative and quantitative data for Component 2, paraprofessional training. Chapter V offers conclusions and recommendations based upon the results of the evaluation.

## II. EVALUATION METHODOLOGY

### PROGRAM OBJECTIVES

The goal of the SIG program was to improve special education teachers' knowledge and skills in instructional strategies geared to improving the learning performance of handicapped students. In order to achieve this goal, the following objectives will be met: special education teachers in MIS and SIE classes will be knowledgeable about effective strategies for teaching language arts that contribute to inproving the performance of handicapped students in special class programs; paraprofessionals working in special class programs in elementary and intermediate schools will increase their knowledge of effective techniques for assisting handicapped students in learning activities which increase performance.

### EVALUATION QUESTIONS

O.E.A.'s evaluation assessed three indicators of program success: increase in the participating teachers' knowledge of the ten elements of effective instruction, increase in the participants' (teachers' and paraprofessionals') perceptions of their knowledge of workshop topics, and participants' satisfaction with various aspects of the training. The evaluation sought to answer questions in the areas of program procedures (implementation) and outcomes, and included the following:

Procedures/Implementation

- What topics did trainers cover in the workshops?
- What types of materials did trainers distribute at workshops?
- What activities occurred during the training sessions?
- Which factors did trainers feel contributed to the success of the program?
- What, if anything, did trainers feel impeded the success of the program?

Outcomes

- Did participants feel they had the opportunity to ask questions and express their ideas in the workshops?
- Did participants feel the materials they used were helpful?
- Did participants' perceptions of their knowledge of topic areas increase as a result of their training?
- What was participants' overall assessment of the training?

EVALUATION PROCEDURES

Instrumentation

O.E.A. developed the "Five-Day Professional Development Questionnaire", which assessed teachers' perceptions of their knowledge of specific topics covered in the workshops. The questionnaire contained 20 close-ended questions. Participants responded on a six-point scale ranging from little knowledge or familiarity (one) to extensive knowledge or familiarity (six).

The "Staff Development Survey" and "Paraprofessional Training Questionnaire" assessed the participants' perceptions of the amount of knowledge they gained, the relevance of what they

learned, the extent of their opportunity to ask questions, the helpfulness of the materials, the extent to which they could apply what they learned, and their overall assessment of the training. The teacher and paraprofessional forms contained six-point scales for all items.

O.E.A. developed an interview schedule to gather additional information about participants' perceptions of the training program. O.E.A. field staff used observation schedules to describe the training sessions of each component.

Sample

The sample consisted of all participating teachers and paraprofessionals in regional and citywide programs. O.E.A. staff members interviewed a sample of 22 teacher trainers and ten site supervisors who assisted with the training, and observed a sample of 17 training sessions (out of 673) in Component 1. This included a minimum of two workshops and their respective trainers from each region and four from Citywide Services. For Component 2, O.E.A. staff members conducted interviews with a sample of six trainers and observed six paraprofessional training sessions (out of 125), three in regional programs and three in citywide programs.

Data Collection

Teacher trainers administered the "Five Day Professional Development Questionnaires" to teachers before the first workshop (beginning in October), after the second, and after the

fifth (in June). They administered staff development surveys after the fifth workshop.

Teachers completed a total of 7,453 forms during the three administrations of the questionnaire. The number of teachers completing the questionnaire at each administration differed. Approximately 3,000 teachers completed the form before training began; after the second workshop, approximately 2,300 completed the form, indicating an attrition rate of 23 percent. Approximately 1,700 completed the questionnaire after the fifth session, indicating further attrition of 26 percent.

Trainers administered the "Paraprofessional Training Questionnaire" after participants had received 15 hours of training (from April through June). During that period 1,514 paraprofessionals completed their training questionnaire, representing approximately 44 percent of the total number who received training. O.E.A. field consultants interviewed teacher trainers and conducted observations from February through June.

Data Analysis

O.E.A. computed response frequencies and examined changes in mean responses on the questionnaires. Since all teachers of self-contained classes were required to attend the training sessions, O.E.A. assumed that the participants who attended the last training session also attended the earlier ones. O.E.A. did not use a repeated measures design to compare teachers' perceptions of their familiarity with workshop topics, but compared group means obtained at the three administrations of the

questionnaire. As the number of responses on the second and third questionnaires fell, it is possible that the data teachers provided at later administrations were not representative of the entire group. O.E.A. could not match responses across administrations because of a decision to maintain teacher anonymity. This decision had been made to increase the response rate of participants.

O.E.A. also tabulated differences in the knowledge questions on the staff development and the paraprofessional training forms, using the t-test to determine statistical significance. O.E.A. staff analyzed responses to the two open-ended questions on the staff development forms (including the one for paraprofessionals) as well as descriptions of the observed workshops in the two components.

## III. EVALUATION FINDINGS FOR COMPONENT 1: TEACHER TRAINING

### IMPLEMENTATION

The State Incentive Grant to Improve Pupil Performance Program provided five-day training workshops. The Manhattan region held its workshops at Teachers College and City College. The Bronx and Staten Island regions held their training sessions at their respective regional offices. Brooklyn West held its workshops at J.H.S. 293, Brooklyn East at Fort Hamilton Army Base, and Queens at the School for Career Development. These workshops presented teaching strategies and techniques of effective instruction necessary to enhance the participants' skill in meeting the needs of special education students. Specific topics included: analyzing students' needs, planning, high expectations, engaged learning, explicit teaching, questioning, directions and correction procedures, monitoring/feedback, retention and transfer, and generalization.

The D.S.E. gave trainers packets of training materials developed by the Office of Curriculum and Professional Development, to be used in the five days of training. Materials, including topics, agendas, and instructions pertaining to the first two days of training, were distributed first, not much before the start of the staff development program itself. While the trainers met with D.S.E. program coordinators before the training, they themselves did not receive any formal training before the workshops began.

Training combined the use of lecture, demonstration, and group participation activities, including hands-on experiences. The trainers provided a great variety of materials including workshop agendas, curriculum and informational literature, and reference lists. Trainers prepared some materials for immediate use by teachers in their classrooms.

O.E.A's observations indicated that the trainers were well prepared; they organized sessions systematically and elicited active teacher participation. O.E.A.'s observations and discussions indicated that participants were receptive to the information presented; they appreciated the diversity and quantity of training materials as well as the trainers' demonstrations of how to use them; teachers liked the game-like approach which provided them with an alternative technique for classroom instruction. Trainers encouraged participants to share their experiences with each other and participants responded positively to this activity.

Trainers' Perceptions

The trainers were generally positive in their evaluations of the training. They appreciated the training packages and materials which included a training manual with workshop scripts, activities and transparencies. Some citywide trainers reported that Adapting Curriculum, used on the fifth day of training, was particularly applicable to the teachers' needs. According to the trainers, the receptive attitude of the participants, the variety of game-like activities, the adapted

materials, and the introduction of new materials all facilitated the program. The trainers reported that they took particular satisfaction in providing a large number of teachers with a shared professional vocabulary.

Despite these positive perceptions, trainers reported that several factors limited the effectiveness of the training. They felt that more trainers and a greater amount of preparation time would add to the effectiveness of the workshops. They claimed that they had been allowed a very short time to prepare the training sessions. They complained about inadequate substitute coverage on the school level. At some locations, because schools had difficulty hiring the requisite number of substitute teachers to cover participants' classes, workshop attendance was low. At those sites it was difficult for some teachers to attend a scheduled workshop. Other trainers reported that the uniform training procedures they employed failed to meet the needs of participants with widely different experience and representing varying program service categories.

Although the trainers in the regional program liked most materials they received, trainers in the Citywide program reported that some of the information was not applicable to their student population. They pointed out that some content and methodology was not relevent to students in all service categories. For example, trainers who taught deaf students frequently voiced this complaint when grouped with teachers of children with other handicapping conditions. Teachers in the

PEACH training for Citywide teachers voiced none of these concerns. Their training was based on individual case studies of students currently in their classes and they considered it to be both relevant to their professional activities and highly effective.

Some trainers in both regional and Citywide programs indicated that the training sites were not equally accessible to all participants. Trainers (those involved in PEACH excepted), also felt that the program would be stronger if there were follow-up activities in the classroom.

## OUTCOMES

Participating teachers assessed the effectiveness of the five-day training program by reporting on changes in their own knowledge and on attitudes about various characteristics of the program. Teachers appraised their familiarity with the topics covered in the workshops by completing the "Five-Day Professional Development Questionnaire."

### Increased Knowledge

The program objective for teachers attending the first two workshops was:

- The participating teachers will indicate that they have increased their knowledge of specific topics included in the ten areas of effective instruction as measured by a statistically significant ($p < .05$) mean gain on the relevant items of the "Five-Day Professional Development Questionnaire" administered before and after the training.

For each of the topics, O.E.A. analyzed the statistical

significance of the perceived gains by using a t-test for unmatched groups and calculating effect sizes to show educational meaningfulness.[1] The mean gain in each of the areas was statistically significant at the .05 level (see Table 1) and the objective was met. The mean gains were small, ranging from 0.1 to 0.7. Concomitant effect sizes ranged from small to medium (.11 to .59), indicating little to moderate educational meaningfulness. Both the small mean gain and the limited effect size were due to the homogeneity of participants' responses with respect to prior knowledge. Respondents reported a high level of prior knowledge before training; consequently potential gains in knowledge were limited. It is also possible that small gains were significant because of the large sample size.

A program objective for all participating teachers was:

- Seventy-five percent of the participating teachers who completed the training will indicate they perceived that their overall knowledge of the workshop topics increased, as shown by an increased score on the relevant questions of the staff development questionnaire.

Teachers completed the staff development questionnaire after the fifth training session. The form contained questions which asked participants to rate the amount of knowledge they possessed on workshop topics before and after the training. Over 82

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[1] The effect size, developed by Jacob Cohen, is a ratio of the mean gain to the standard deviation of the gain. This ratio provides an index of improvement in standard deviation units irrespective of the size of the sample. Effect size (E.S.) is interpreted to indicate educational meaningfulness, and an E.S. of .80 is thought to be highly meaningful, while one of .20 is considered to be only slightly so.

TABLE 1
Mean Scores[a] of Teachers' Perceived Familiarity with Areas Covered in Workshops Before and After the Training[b]

| Area | Before Training | | After Training | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Number of Participants | Mean Score | Number of Participants | Mean Score | Difference Between Means | Standard Deviation of Difference | t[c] | Effect Size |
| Identifying critical elements of instruction[d] | 3,017 | 3.9 | 2,368 | 4.6 | 0.7 | 1.2 | 21.7* | .59 |
| Analyzing students needs[e] | 2,933 | 4.8 | 2,324 | 5.0 | 0.2 | 2.9 | 12.6* | .35 |
| Engaging students in learning[f] | 2,910 | 4.8 | 2,269 | 4.9 | 0.1 | 1.0 | 4.0* | .11 |
| Explicit teaching/ modeling[g] | 2,799 | 4.9 | 2,204 | 5.1 | 0.2 | 3.3 | 15.7* | .45 |
| Questioning[h] | 2,849 | 4.8 | 2,218 | 5.1 | 0.3 | 2.3 | 14.3* | .41 |
| Direction and correction[i] | 2,261 | 4.6 | 1,736 | 5.0 | 0.4 | 1.0 | 12.4* | .39 |
| Monitoring[j] | 2,231 | 5.1 | 1,720 | 5.2 | 0.1 | 1.5 | 4.5* | .14 |
| Feedback, correction and praise[k] | 2,234 | 5.1 | 1,728 | 5.3 | 0.2 | 1.4 | 7.3* | .23 |
| Retention[l] | 2,236 | 4.9 | 1,723 | 5.1 | 0.2 | 1.5 | 9.9* | .32 |
| Transfer/generalization procedures[m] | 2,230 | 5.0 | 1,738 | 5.2 | 0.2 | 0.9 | 9.1* | .29 |
| Teacher as decision maker[n] | 2,117 | 5.0 | 1,666 | 5.2 | 0.1 | 1.1 | 7.4* | .24 |

* $p < .05$

[a] Based on the six-point scale on the "Five Day Professional Development Questionnaire."

[b] O.E.A. assessed teachers' perceived familiarity with the first five topics before the first and after the second training sessions and assessed their perceived familiarity with the last six topics after the second and fifth training sessions.

[c] Test of significant difference between means of unmatched groups.

• Teachers' perceived familiarity in all areas showed statistical significant increases indicating a change greater than zero. However, except for identifying critical elements of instruction, small effect size suggested the gains were of little practical significance.

percent of the 3,077 teachers completing the staff development questionnaire indicated that they increased their knowledge of workshop topics after completing the five days of training. Thus, the objective was met. Data on the staff development questionnaire indicated that the teachers' perceptions of the amount of training-related knowledge they possessed before and after training increased from a mean of 3.9 to a mean of 5.1 on the six-point scale. The mean gain of 1.2 (S.D. = 1.08) based upon the average of individual gains, was statistically significant ($p < .05$). The effect size, computed to denote the educational significance of the gain was large (1.15), indicating that the increase in knowledge was highly meaningful.

For the purposes of determining program success, the criteria for the accomplishment of the remainder of the evaluation objectives were as follows:

- Seventy-five percent of participating teachers will indicate that they have a positive overall assessment of the workshops, as shown by their selection of four through six on the six-point scale on factors relating to the quality of training.

About 2,400 teachers rated the quality of training after session five. Over 90 percent of participants assigned the value of four, five, or six to each of the five relevant questions (see Table 2.) Thus, the objective was met. The mean scores for each of the areas ranged from 5.1 (relevance, applicability, overall assessment) to 5.4 (opportunity to ask questions and present ideas) out of a possible six.

TABLE 2

Teachers' Perceptions of Quality of Training

| Factor | Number of Teachers | Mean Rating | S.D. | Percent Showing Positive Response[a] |
|---|---|---|---|---|
| Relevance of workshop information to responsibilities | 2,415 | 5.1 | 1.0 | 90.5 |
| Sufficiency of opportunities to ask questions and present ideas | 2,412 | 5.4 | 1.0 | 93.3 |
| Helpfulness of materials used in presentation | 2,434 | 5.2 | 1.0 | 92.2 |
| Applicability of what was learned to daily activities | 2,438 | 5.1 | 1.0 | 91.8 |
| Overall assessment of training | 2,432 | 5.1 | 1.0 | 91.5 |

Source: Staff Development Questionnaire

[a] Ratings of 4, 5, and 6 indicate a positive response.

- Over 90 percent of participating teachers gave positive responses to all questions designed to ascertain the quality of training

## IV. EVALUATION FINDINGS FOR COMPONENT 2: PARAPROFESSIONAL TRAINING

### IMPLEMENTATION

Training topics for paraprofessionals dealt with effective instruction and included: the multi-sensory approach to reading; behavior and classroom management; and social-emotional development. Training emphasized the role of the paraprofessional as a teacher-facilitator. Paraprofessionals discussed the need for open communication between the teacher and the paraprofessional.

Trainers geared the workshop presentations and activities to the participants. They developed specific materials, used examples most relevant to them, and selected hands-on activities most applicable to the workshop participants. O.E.A.'s observations indicated that paraprofessionals preferred presentations which discussed the implementation of specific skills and strategies to those which provided theoretical information; they appreciated the inclusion of hands-on activities. O.E.A. consultants observed that the frequent use of examples provided a concrete framework for presenting the information. Open discussions permitted participants to voice their problems, as well as share ideas and experiences.

### Trainers' Perceptions

Almost all of the trainers interviewed reported that the training was relevant to the participants' daily activities. Trainers perceived that the practical strategies were

particularly useful. They asserted that the behavioral management skills, the techniques of explicit instruction, and the collaborative techniques for working with special education teachers were directly applicable to the paraprofessionals' classroom activities. The trainers stated that the workshops contributed to the paraprofessionals' sense of professional esteem, as they had never been included previously in professional training.

Although trainers perceived the SIG program to be generally beneficial, they encountered a few problems. For example, because the paraprofessionals had varying educational backgrounds including the number of years of post-high school preparation; trainers felt the training was less effective than it could have been for some participants. Trainers suggested that follow-up activities in the classroom and joint training for teachers and paraprofessionals would be useful.

OUTCOMES

Participating paraprofessionals assessed the effectiveness of their training by reporting on changes in their own knowledge and on their attitudes toward various program characteristics. A program objective for all participating paraprofessionals was:

- Seventy-five percent of the participating paraprofessionals will indicate that they perceive their knowledge of the workshop topics has increased, as shown by an increased score on the relevant questions of the "Paraprofessional Training Questionnaire."

Over 81 percent of the 1,514 paraprofessionals completing

the questionnaire indicated that they increased their knowledge of topics covered in the workshops after having completed the training. The objective was thus met. The paraprofessionals' perceptions of the amount of training-related knowledge they possessed before and after training increased from a mean of 3.9 to a mean of 5.5 on the six-point scale. The mean gain of 1.6 (S.D. = 1.4), based upon the average of individual gains, was statistically significant ($p < .05$). The effect size, computed to denote the practical significance of the gain, was large (1.18), indicating that the increase in knowledge might be considered highly meaningful.

For the purpose of determining program success, the criterion for the accomplishment of the second evaluation objective was as follows:

- Seventy-five percent of participating paraprofessionals will indicate that they had a positive overall assessment of the workshops, as shown by their selection of four through six on the six-point scale on the relevant questions of the paraprofessional training questionnaire.

About 1,500 paraprofessionals assigned ratings to each of five relevant program factors at the conclusion of the training. Over 90 percent of the participants assigned the value of four, five, or six to each of the relevant questions. Thus the evaluation objective was met. (see Table 3). The mean scores for each of the areas ranged from 5.4 (applicability) to 5.7 (opportunities to ask questions) out of a possible six.

TABLE 3

Paraprofessional's Perceptions of Quality of Training

| | Number of Paraprofessionals | Mean Rating | S.D. | Percent Showing Positive Response[a] |
|---|---|---|---|---|
| Usefulness of workshops | 1,517 | 5.6 | .75 | 92.1 |
| Sufficiency of opportunities to ask questions and present ideas | 1,523 | 5.7 | .73 | 92.5 |
| Helpfulness of materials used in presentation | 1,516 | 5.5 | .79 | 91.7 |
| Applicability of what was learned to daily activities | 1,509 | 5.4 | .85 | 90.7 |
| Overall assessment of training | 1,509 | 5.5 | .74 | 92.0 |

Source: Paraprofessional Training Questionnaire

[a] Ratings of 4, 5, and 6 indicate a positive response.

- Over 90 percent of the participating paraprofessionals gave positive responses to all questions designed to ascertain the quality of training.

## V. CONCLUSIONS AND RECOMMENDATIONS

Components 1 and 2 of The State Incentive Grant to Improve Pupil Performance were successfully implemented and met their goals of providing effective training to special education teachers and paraprofessionals. Interviews with teacher trainers in both components of the program and surveys completed by program participants indicated that program services generally met the needs of the teachers and paraprofessionals.

According to the teacher questionnaire responses, teachers became somewhat more familiar with the ten elements of effective instruction after they participated in the training sessions. Changes in familiarity with specific topics were small. However, both teachers and paraprofessionals reported that their overall knowledge had increased as a result of the training. Over 90 percent of participating teachers and paraprofessionals reported favorably on all aspects of the workshops they were asked to evaluate, giving an overall positive assessment to the training.

Trainers were also generally positive in their assessment of both components but they did mention several problems. Component 1 trainers felt that they could have done an even more effective job had there been more trainers and preparation time available. Another complaint was that substitute coverage was sometimes inadequate. Citywide trainers would have preferred to receive information specifically applicable to the population they served. Training sites more convenient to participants and

training content more compatible with the level of teacher experience and the program service categories of their students would be desirable.

In general, the program presented a fixed curriculum that addressed critical issues in special education instruction. By presenting a uniform set of materials, trainers were able to address some compelling issues. On the other hand, by making attendance compulsory regardless of previous training and background, the topics were not the ones that all teachers needed or found interesting and useful.

Component 2 trainers noted that the differing educational backgrounds, years of experience, and differing professional responsibilities of program participants were impediments. Trainers felt that content highly useful to some participants was less useful to others. They also suggested that, to improve the effectiveness of the program in the future, follow-up activities be offered, and teachers and paraprofessionals attend some training sessions together. Therefore, greater coordination between training programs for teachers and training programs for paraprofessionals would be beneficial. As with the teachers, program topics selected on the basis of experience and need would be a positive change.

The conclusions, based upon the findings of this evaluation, lead to the following recommendations:

- Allow trainers more time to prepare for workshops.
- Offer training at more sites, possibly on a rotating basis, to make workshop attendance more convenient.

- Offer teachers and paraprofessionals their choice of training topics based on educational background, years of experience, and professional need (including their students' program service categories).
- For Citywide teachers, develop training geared to specific program service categories.
- Offer follow-up in-school activities for paraprofessionals.
- Offer parallel training sessions to teachers and paraprofessionals on topics of mutual concern.